

$\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxypropane

$\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxyethane

$\text{CH}_3\text{CO}_2\text{CH}_3$ - Methyl acetate

i) Physical State: At room temperature ethers are colourless, neutral and with pleasant odour. and low dielectric ether are highly flammable.

ii) Solubility: ethers are less soluble in water than corresponding alcohols.

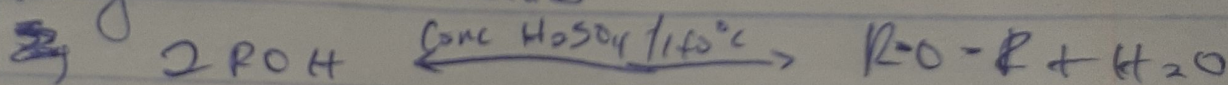
iii) Density: Most simple ethers are less dense than water. The density increases with increasing R.M.M. Some cyclic ethers are denser than water.

iv) Boiling point: Lower molecular mass ethers have a lower boiling point than the corresponding alcohols.

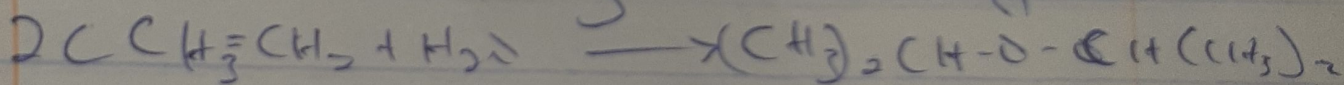
v) ethers are inert at moderate temperature.

3i Partial dehydration of alcohols

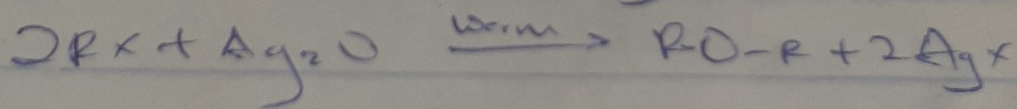
Simple ethers are manufactured from alcohols by catalytic dehydration. The alcohol in excess and concentrated tetraoxosulphate (vi) acid is heated at a carefully maintained temperature of 140°C the process is known as continuous esterification. If excess alcohol is not used, the temperature is as high as $170-180^{\circ}\text{C}$ further dehydrated ~~to~~ yield alkenes occurs



ii Controlled catalytic hydration of alkenes



iii From Halobenzene and dry silver (i) oxide



Uses of ethylene oxide

1. It is used as an intermediate in the hydrolytic manufacture of ethylene glycol.
2. Ethylene oxide is used in preparation of nonionic emulsifying agents, plastics and several synthetic detergents.

Ethene

3 ethene reacts to react as a gaseous sty
Stoichiometry agent.